

IN THE CLAIMS:

Please amend claim 11 as indicated below.

Please cancel claim 13 as indicated below.

A listing of the status of all claims 1-13 in the present patent application is provided below.

1. (Previously Presented) A method for transforming a C/C++ program having a first multi-tasking property to a C/C++ program having a second multi-tasking property, the method comprising:

transforming a first C/C++ program having a first multi-tasking property, wherein the first multi-tasking property comprises a property relating to a preemptive multitasking model, into a data structure;

transforming the data structure to include an explicit multi-tasking transfer of control command;

optimizing the data structure to reduce an amount of program state that is saved at a transfer of control; and

generating a second C/C++ program having a second multi-tasking property, wherein the second multi-tasking property comprises a property relating to a run-to-completion model, using the optimized data structure.

2. (Original) The method of claim 1, wherein the data structure

further comprises a syntax tree.

3. (Original) The method of claim 2, wherein the step of transforming the data structure to include an explicit multi-tasking transfer of control command further comprises:

converting the syntax tree to a continuation-passing style (CPS).

4. (Cancelled)

5. (Original) The method of claim 1, wherein the first program having a first multi-tasking property operates using a first program language and the second program having a second multi-tasking property also operates using the first program language.

6. (Previously Presented) A system for transforming a C/C++ program having a first multi-tasking property to a C/C++ program having a second multi-tasking property, the system comprising:

a data structure transformer for transforming a first C/C++ program having a first multi-tasking property into a data structure, wherein the first multi-tasking property comprises a property relating to a preemptive multitasking model;

a multi-tasking transformer for transforming the data

structure to include an explicit multi-tasking transfer of control command;

a program state optimizer for optimizing the data structure to reduce an amount of program state that is saved at a transfer of control; and

a program generator for generating a second C/C++ program having a second multi-tasking property using the optimized data structure, wherein the second multi-tasking property comprises a property relating to a run-to-completion model.

7. (Original) The system of claim 6, wherein the data structure further comprises a syntax tree.

8. (Original) The system of claim 7, wherein the multi-tasking transformer further comprises:

a converter for converting the syntax tree to a continuation-passing style (CPS).

9. (Cancelled)

10. (Original) The system of claim 6, wherein the first program having a first multi-tasking property operates using a first program language and the second program having a second multi-

tasking property also operates using the first program language.

11. (Currently Amended) An article of manufacture for transforming a C/C++ program having a first multi-tasking property to a C/C++ program having a second multi-tasking property, the article of manufacture comprising:

at least one processor readable ~~carrier~~ medium; and
instructions carried on the at least one ~~carrier~~ medium;

wherein the instructions are configured to be readable from the at least one ~~carrier~~ medium by at least one processor and thereby cause the at least one processor to operate so as to:

transform a first C/C++ program having a first multi-tasking property into a data structure, wherein the first multi-tasking property comprises a property relating to a preemptive multitasking model;

transform the data structure to include an explicit multi-tasking transfer of control command;

optimize the data structure to reduce an amount of program state that is saved at a transfer of control; and

generate a second C/C++ program having a second multi-tasking property using the optimized data structure, wherein the second multi-tasking property comprises a property relating to a run-to-completion model.

12. (Previously Presented) A processor readable medium for providing instructions to at least one processor for directing the at least one processor to:

transform a first C/C++ program having a first multi-tasking property into a data structure;

transform the data structure to include an explicit multi-tasking transfer of control command;

optimize the data structure to reduce an amount of program state that is saved at a transfer of control; and

generate a second C/C++ program having a second multi-tasking property using the optimized data structure.

13. (Cancelled)